

[Review of]

## Bibliographical and Literary Notes.

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*A Treatise on Diseases of the Nervous System.* By WILLIAM A. HAMMOND, M. D., Professor of Diseases of the Nervous System, and of Clinical Medicine, in the Bellevue Hospital Medical College; Physician-in-Chief to the New York State Hospital for Diseases of the Nervous System, etc., etc. With Forty-five Illustrations. New York: D. Appleton & Co., 1871. 8vo, pp. 750.

HEADLAND, in his admirable essay on the action of medicine, founds his views primarily on certain propositions capable of distinct proof, superadding to these, hypotheses statedly not determined, but probable, and indulging, moreover, in other less certain speculations and theories, seeming to lead in the direction of truth.

Dr. Hammond; in the book before us, makes no such classification of his statements. He says in the preface: "The reader will readily perceive that I have views of my own on every disease considered, and that I have not hesitated to express them." The views and observations of other writers upon nervous disease are so frequently quoted as to show the most intimate and comprehensive knowledge of the literature of the subject, and are often freely commented on, but the author's own statements are made with a positiveness which, especially when the observations upon which they are based are embraced within a period of five years, is more convincing to the student and young practitioner, than to those who have lived to see the most brilliant and widely-accepted theories exploded and forgotten, the most potent remedies and surest methods of "cure" fall into disuse, their names only remaining upon the catalogue of our armamentary, an ever-accumulating testimony of human credulity and enthusiasm.



The method of instruction here adopted directly supplies the demand of the present time, in this country, for the easy acquisition of the means of rapidly attaining pecuniary success by the practice of a specialty. It may well be hoped, however, that the higher civilization of the future will induce a higher standard of knowledge, more philosophic aims, more diligent and reverent searching after truth for its own sake, than our schools now exhibit.

The arrangement of the work and division of the subject on anatomical principles certainly conduce to clearness, and may well serve the student as a means of systematizing his ideas, though it may be questioned if the method has not been carried further, in some instances, than the present state of our knowledge justifies.

The introduction relating to instruments and apparatus, the remainder of the work consists of five sections, respectively treating of diseases of the brain, of the spinal cord, cerebro-spinal diseases, those of nerve-cells, and of the peripheral nerves. Diseases of the sympathetic system, cerebro-spinal meningitis, chronic alcoholism, and Graves's disease, are excluded from consideration as being either little understood, or not sufficiently confined in seat and origin to the nervous system. Diseases are designated as far as possible by the *lesion* and not by the *symptoms*; thus we search in vain in the index for apoplexy, hemiplegia, paraplegia, hypertrophy and atrophy of the brain, hydrocephalus, etc. Information on these subjects is to be derived from the chapters on cerebral congestion, meningeal hæmorrhage, partial cerebral anæmia from obliteration of cerebral arteries, cerebral softening, cerebral sclerosis, spinal hæmorrhage, softening, etc. Of course this principle of nomenclature by lesions cannot be carried out in every case. Thus we have a separate chapter on aphasia, the names tetanus, hydrophobia, and hysteria are retained, and the author describes for the first time an affection "mainly characterized by an inability to retain the fingers and toes in any position in which they may be placed, and by their continual motion," under the name of "athetosis," which is certainly a more convenient handle to a group of



symptoms than "atrophy and disappearance of motor and trophic nerve-cells."

Those of the profession who, belonging rather to the conservative class, believe that the differential diagnosis of many diseased conditions of the cerebro-spinal tract is well-nigh impossible during life, and that several such conditions frequently coexist in the same individual, will not only be roused to wonder at the absoluteness with which the rules for distinguishing various affections are laid down, but may find the book less convenient for reference than if the classification were based more directly on clinical history.

Next to the diagnostic infallibility, if we may so express it, which pervades the work, we are struck with the strong reliance placed upon electricity and medicinal agents to effect cure. The use of the galvanic current is advised in seven out of nine of all the affections treated; the use of the bromides in fully one-half; the oxide of zinc, strychnia, phosphorus, the chloride of barium, and ergot, quite frequently, and far more positive results are predicted than are looked for by the majority of the profession in the treatment of diseases of the nervous system. Hyperæmia and anæmia of the nervous centres are ever prominent in the author's mind as elements of disease, and he gives evidence of his belief in the practicability of controlling these elements in nearly every chapter. The constant galvanic current, "when used so as to stimulate the sympathetic nerve" (by placing the two poles on the surface of the neck), he states, has the power of contracting the cerebral blood-vessels, and "a similar effect is caused by passing the current directly through the brain, the poles being applied to the mastoid processes." It is claimed that observation with the ophthalmoscope shows contraction of the retinal vessels while the current is acting, "and hence there can be no doubt that the result is produced upon those of the brain." We believe that the authorities in this community most reliable on the subjects of ophthalmoscopic investigation and intra-ocular circulation do not confirm these statements; at any rate, we may well hesitate to accept the conclusion drawn. But the author is equally confident of being able to reduce the amount of blood in the brain by the use of bromide of

potassium in the dose of twenty to forty grains three times daily. The phraseology of the directions given leads us to suppose that the dose intended to be prescribed is from fifteen to thirty grains; but as the teaspoonful is used as the standard of measure, of which a fluidounce contains only six, the doses would actually be as above stated. The desired results indicated by drowsiness, etc., would be expected in what is described as active cerebral congestion, in about ten days. No explanation is offered why the result does not take place earlier, if the presence of the bromide in the system causes the contraction of the vessels and cessation of the symptoms, and nothing is said of the probable duration of and reaction from uncomplicated cephalic hyperæmia, in about ten days or less, if it were let entirely alone, or if an efficient purgative were administered. The bromides are reënforced in the author's practice by the oxide of zinc, in doses of two grains, three times daily, but, as the subsidence of symptoms does not appear to be hastened, the reason for its administration is not obvious. Iron, quinine, strychnia, and phosphoric acid, are advised to be used together, to overcome "a little debility and mental depression" succeeding the congestion. We think many would prefer to "let well enough alone," after such an attack.

In cerebral anæmia, alcoholic stimulation is the author's main reliance, next to nutritious diet, and with the use of the combination of tonics above spoken of; and the use of bromides when this condition is diagnosticated is discouraged in the strongest terms. We do not think the experience of the profession generally coincides with that of our author as regards the physiological activity of the bromides, in the usual doses, but any *prohibition* of medication would seem to merit attention.

The direct galvanic current is stated to be equally efficient in regulating the diameter of the blood-vessels, and consequently the amount of blood, in the spinal cord, as in the cerebral mass, the poles being applied, as usual, to the skin over the part. Of medicinal agents, ergot, in drachm-doses, three times daily, is relied on to produce contraction of the vessels of the cord; and the indication of increase of the



amount of blood in the organ, and improvement of its nutrition, "is easily fulfilled by strychnia, phosphorus, phosphoric acid, and opium."

The chloride of barium is stated to have produced marked improvement in the symptoms in sclerosis of the brain and spinal cord, but no theory of its mode of action is advanced. Nitrate of silver still retains a place in the author's estimation, though not often mentioned, and not at all in connection with epilepsy. When we remember the reliance placed upon it, and other by-gones, by the profession, in the treatment of that disease, not many years ago, we may be pardoned for doubting whether the remedies now so highly recommended are not destined to fall into disuse in their turn. The fluctuations in the condition of unmedicated epileptics are so various that statistics require to be based on very long and discriminating observation, to be valuable.

As our author unhesitatingly reduces the essential pathology of epilepsy to either congestion or anæmia, we are not surprised to find him relying upon the bromides, the oxide of zinc, and, of course, the primary galvanic current, or upon strychnia, for great improvement or cure in a large proportion of cases. We are surprised, however, to find no mention of limitation of the quantity of food as a therapeutic measure; the importance of which, in most cases of epilepsy capable of improvement, cannot well be over-estimated.

On the whole, the tendency of the therapeutics of the book is in the right direction, most of the remedies, in the doses used, not being likely to do harm—at any rate, unless it be where mercurialization is advised in inflammatory disease; and the supporting line of treatment, as by iron, quinine, cod-liver oil, and stimulants, being adopted in conditions of debility. Anodynes are used sparingly unless where no hope of recovery exists. The treatment of syphilitic lesions by mercury and iodide of potassium is advised. The abstraction of blood, application of cold and heat, derivation, and counter-irritation, are used discriminatingly.

The chapter on insanity occupies less than sixty pages. It is obviously impossible to treat a subject of such magnitude and importance as this, satisfactorily, within such space, but

this portion of the work will be especially likely to be looked at with curiosity and interest on account of the peculiar views which have been heretofore publicly promulgated by the author. And we think that, if evidence were wanting that his stand-point is theoretical rather than practical in regard to insanity, we should find it here. His classification is not one of types of disease, but is based upon his own conception of what he calls the four "sub-forces" which make up the "force" called the mind, namely, perception, the intellect, the emotions, and the will. We believe this view to be founded in confusion of ideas. It has been customary to speak of the intellect, emotions, etc., as *entities*, but only by a figure of speech. Introspection and observation tell us that they are *modes of action*, not forces, and we should keep the matter clearer if we spoke only of volition and intellection instead of *the will*, and *the intellect*. That these functions of the individual self are always, during life, associated with the chemical and vital action of nerve-cells, and that disease of the latter may cause irregularity and imperfection of the former, we are all ready to admit, and upon this ground we hold the moral and legal responsibility of the lunatic to be impaired or destroyed. (But neither this nor any thing in the chapter before us proves that cerebration constitutes the whole of the inner life. The voice of the vast majority of mankind contradicts it by reason of a *consciousness* higher than that of the body.) If our author had said that *mental action* was made up of perception, intellection, emotion, and volition, we could follow his thought, but even then we should claim that volition differs from the other processes in its unity of character, and yet, in never being carried on but in association with the others, perhaps constituting their direct combined result; while we conceive that perception, intellection, and emotion, besides being varied in character, go on even in spite of previous volition. From this we should deduce that volition would never be deranged but with or through disorder of one or more of the other functions; moreover, we should find that clinical observation would confirm our view.

The various forms of insanity are grouped together in classes for purposes of description and study. It is an arbi-



trary, not a natural grouping, and the same individual may manifest disease in very different ways at different times. As the study of this affection can only be pursued with advantage, primarily, at any rate, from the practical stand-point, by the observation of actual cases, a simple classification, according to the most prominent characteristics for the time being, is the most advantageous, and in Esquirol's five classes (as given in the book before us), melancholia, monomania, mania, dementia, and idiocy, we have a sufficiently elaborate scheme, for it will often be difficult to decide in which class to put a given case. General paralysis, epilepsy, etc., though usually accompanied by characteristic mental symptoms, are not invariably so, and it is more convenient to describe them as causes and complications of insanity than to make separate classes of them.

Dr. Hammond's seven classes are perceptual, intellectual, emotional, and volitional insanity, mania (the union of two or more of the preceding), general paralysis, and idiocy and dementia. It would be useful if lunatics could be induced to conform to it; but, except so far as it covers the same ground as Esquirol's, it conveys false impressions of insanity as we really find it. The existence of volitional insanity, that in which the will alone is affected, is denied by the highest authorities, its most characteristic feature as described being a failure to persist long enough to be investigated, and like another apocryphal form, mania transitoria, invariably presenting itself as the shield for criminal acts. Volition can neither take place alone, nor alone be disordered.

Notwithstanding the imperfect success of others, Dr. Hammond essays a *definition* of insanity; but, though he makes a step in the right direction, he still appears to us to fall short of the mark. The difficulty seems to have been that all the attempts have been not at what Whately calls an *essential* definition, but at an accidental definition or description, which is necessarily imperfect. A true definition separates a phrase from all others, and limits its signification.

Dr. Hammond says: "Insanity, strictly speaking, is only a symptom, and I would define it as a manifestation of disease of the brain, characterized by a general or partial derange-

ment of one or more faculties of the mind, and in which, while consciousness is not abolished, mental freedom is perverted, weakened, or destroyed." The words "characterized by" seem at first refer to "disease," but the context shows them to refer to "manifestation." We must therefore substitute *consisting in* for "characterized by." The succeeding clauses are either merely an extraneous deduction in regard to the *individual*, not belonging to the definition at all, or a gratuitous repetition of the idea included in "derangement of one or more faculties of the mind."

To be perfect, a definition must be simple. Insanity is, primarily, of course, *unhealthiness*; secondarily, *unhealthy mental action*; and by still further limitation, *unhealthy mental action dependent on disease of the brain*. We cannot go far beyond this. It covers the ground exactly, and no more. The term is also frequently and necessarily applied to *the disease* itself, as we have no other name for it.

The author is often happy in description, and quotes various interesting cases, some of which have done duty in the text-books far too long, especially when brought forward, as here, after the lapse of years, in support of the doctrine of momentary insanity. Of course the existence of such a form cannot be *disproved*, but the accounts upon which the doctrine rests are so meagre, ancient, and unsatisfactory, and it is so inconsistent with modern impartial observation of the disease, that we look forward to its ultimate universal recognition as a chimera.

The illustrations of this chapter are singularly infelicitous, considering that they were selected from a large number of photographs of patients in the New York Asylum. Acute mania in the person of a Celtic maiden wears an expression of imbecility; one illustration of mania with depression, of which the text says "apprehension and terror are plainly depicted on her countenance," stares with a placidity rivalling Mrs. Jarley's wax-works. The next is the picture of a microcephalic Celt, without expression, of unknown history, but intended to illustrate the same disease. Then comes a reproduction of the case of general paralysis from the frontispiece of Bucknill and Tuke, even worse than the original, soon followed



by a figure representing dementia, in which the fixed attitude, clasped hands, and closed eyes would seem to indicate a determined shutting out of the external world, rather than mental weakness.

The illustrations in other parts of the work are excellent.

The author's clear and terse style of diction renders the book exceedingly readable, and the cases reported and cited add much to the interest of the text. There is little in it beyond the comprehension of the average student of medicine; and the fourth volume of Dr. Austin Flint, Jr.'s, "Physiology of Man," soon to be published, will make it more useful to him, the two together being intended to form a complete work on the physiology and pathology of the nervous system.

The symptoms, causes, diagnosis, prognosis, morbid anatomy, pathology, and treatment of each affection, are distinguished by separate headings of broad-faced type, which is exceedingly convenient of reference, and adds to the appearance of the pages. The paper is of an agreeable tint, and the typography is very fine, and surprisingly free from error.

The morbid anatomy and pathology are of course brought fully up to the present state of knowledge, and there is much statistical information under these and other heads, gathered from every source, and here brought together for the first time, and wherever possible this is relied on as the basis of doctrine. The changes of structure are accurately described, as regards both gross and microscopic appearances, and the latest investigations of the minute anatomy of the nervous centres are not merely alluded to but freely quoted, and the author's own observations are frequently given, confirming and adding to what others have done in this field.

The portrayal of symptoms is often graphic and striking. The phenomena of disease are so described as to impress themselves forcibly on the mind of the student. There is so much that is entertaining in the mental and other manifestations of nervous disorder, especially when presented as they are here, that a work of this kind will find many readers outside the profession, and, it may be hoped, will serve not only to interest and amuse, but to induce a closer observance of those hygienic laws upon whose violation many of the ailments here treated

of depend. There is probably no community in the world more in need of caution and warning as to the abuse of the nervous system than our own. The majority of the busy crowd that fills the streets of this city are working at high pressure, and many only realize that human powers are indissolubly associated with physical structure when overtaken by actual disease.

Some of the latter portions of the volume are not elaborated with the care displayed in the earlier part, but system and order prevail throughout.